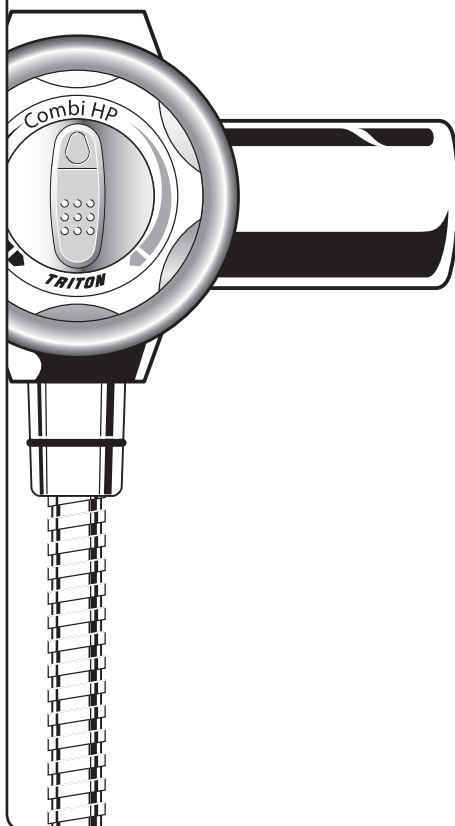


TRITON

**Combi HP
Thermostatic
mixer shower**



**Installation and
operating
instructions**



INSTALLERS PLEASE NOTE THESE INSTRUCTIONS ARE TO BE LEFT WITH THE USER

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To check the product suitability for commercial and multiple installations, please contact Triton's specification advisory service before installation.

Telephone: 0870 067 3767

Facsimile: 0870 067 3334

E mail: technical@tritonshowers.co.uk

INTRODUCTION

This book contains all the necessary fitting and operating instructions for your Triton high pressure thermostatic mixer shower. Please read them carefully.

Please read through the whole of this book before beginning your installation.

The installation MUST be carried out by a suitably competent person and in sequence of this instruction book.

Care taken during the installation will give a long and trouble free life from your mixer shower.

Thermostatic mixers will automatically maintain your chosen temperature, even if taps are turned on elsewhere in the house, and shut off if either the hot or cold supply fails.

For the best performance within the specified running pressure range a minimum flow of eight litres per minute should be available to both inlets.

The mixer shower MUST NOT be subjected to water temperatures above 80°C.

This mixer is designed to operate on higher pressure systems found in the UK up to a maximum of 5 bar running pressure.

The high pressure valve is suitable for modulating type combination boilers and multi-point hot water heaters. It is also suitable for thermal storage, unvented systems and pumped gravity systems.

IMPORTANT: Before installing with a gas instantaneous water heater, make sure it is capable of delivering hot water at a minimum switch-on flow rate of 3 litres per minute. At flow rates between 3 and 8 litres per minute, the appliance must be capable of raising the water temperature to a minimum of 52°C.

The water temperature at the inlet to the mixer must remain relatively constant when flow rate adjustments are made.

Inlet connections are by compression fittings for 15 mm copper pipe.

This valve unit is supplied with a mounting bracket to suit installation in a chased out cavity in a solid wall, a stud partition wall, dry lined wall or fixing to a shower cubicle or panel.

SAFETY WARNINGS

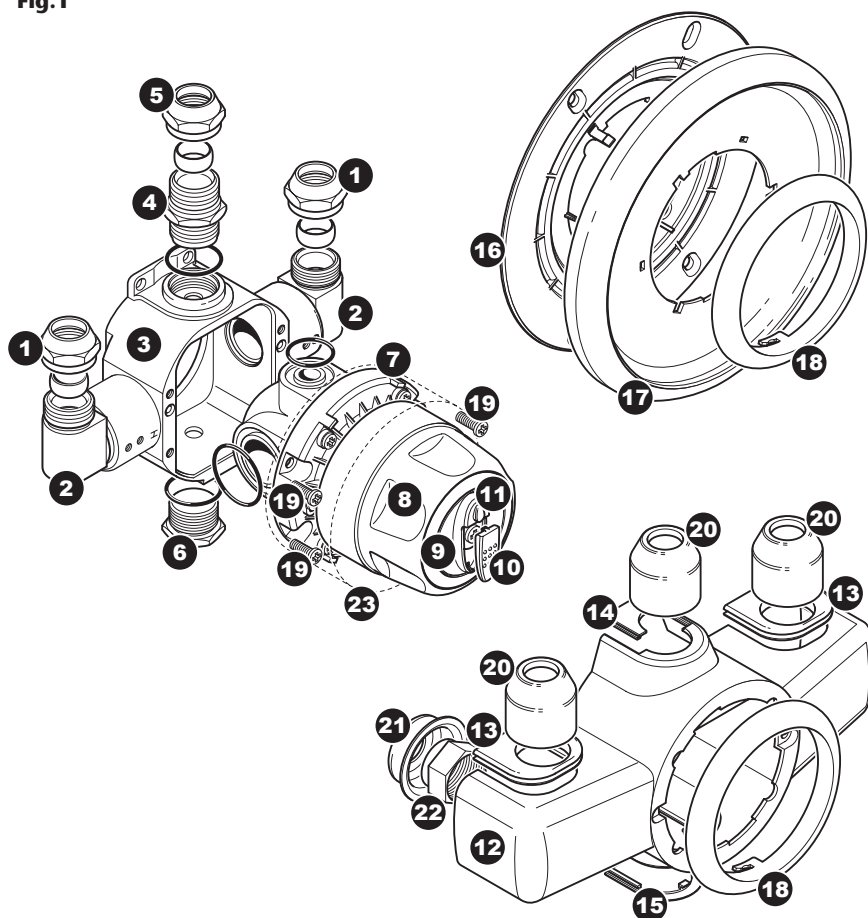
- a.** Layout and sizing of pipework MUST be such that when other services are used, pressures at the shower control inlets do not fall below the recommended minimum.
- b.** DO NOT choose a position where the shower could become frozen.
- c.** The outlet of this appliance MUST NOT be connected to any form of tap or fitting not recommended by the manufacturer.
- d.** The showerhead MUST be regularly cleaned to remove scale and debris.
- e.** Conveniently situated isolating valves in each inlet supply MUST be fitted as an independent method of isolating the shower should maintenance or servicing be necessary.
- f.** If it is intended to operate the shower in areas of hard water (above 200 ppm temporary hardness), a scale inhibitor may have to be fitted. For advice on the Triton scale inhibitor, please contact Customer Service.
- g.** Do not operate the shower outside the guidelines as laid out in 'site requirements'.

Replacement parts can be ordered from Customer Service. See 'spare parts' for details and part numbers.

MAIN COMPONENTS (fig.1)

- | | | |
|--------------------------|--------------------------------------|-----------------------------|
| 1. Inlet nuts and olives | 9. Temperature knob | 16. Flush mount plate |
| 2. Inlet elbows | 10. Knob trim | 17. Flush mount cover |
| 3. Valve housing | 11. Max. temperature override button | 18. Trim ring |
| 4. Outlet adaptor | 12. Cover | 19. Cartridge fixing screws |
| 5. Outlet nut and olive | 13. Inlet trims | 20. Nut covers |
| 6. Outlet blanking plug | 14. Outlet trim | 21. Pipe trims |
| 7. Cartridge assembly | 15. Outlet blanking trim | 22. Hexagonal nut |
| 8. Flow knob | | 23. Shroud (flush fit only) |

Fig.1



SITE REQUIREMENTS

The installation must be in accordance with Water Regulations/Bylaws.

Minimum running water pressure: 1 bar.

Maximum running water pressure: 5 bar.

Maximum static water pressure: 10 bar.

For the best performance within the specified pressure range both hot and cold water supplies must be fed from a common supply and a minimum flow of 8 litres per minute should be available to both inlets.

While the mixer valve is operational (open outlet), inlet pressures MUST NOT be capable of exceeding 7 bar. For effective operation of the internal seals, the maximum static pressure must not be exceeded.

Note: On sites where the running pressure is above 5 bar, the use of a suitably sized pressure reducing valve fitted in the cold mains supply pipework can provide nominally equal pressures at the mixer valve. This should be installed as indicated on the appropriate diagrams shown on the following pages, and set to within the specification of the valve.

For the best performance of this shower both hot and cold water supplies to the shower valve should be fed at nominally equal pressures.

The pipework should be installed such that the flow is not significantly affected by other taps and appliances being operated elsewhere on the premises.

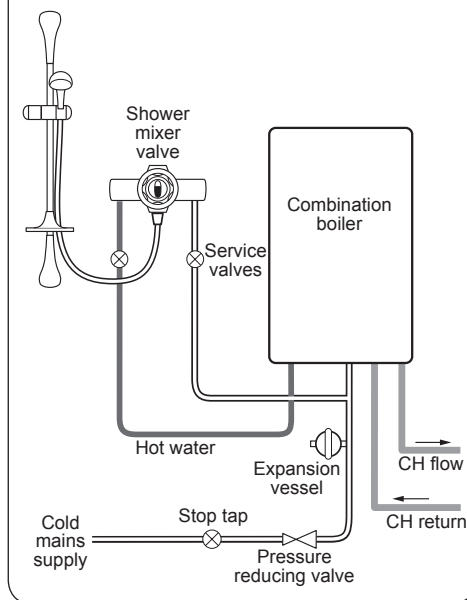
Note: Where thermal store/combi boilers or multi-point heaters are used, if excessive draw offs take place the boiler may not be able to maintain an adequate output temperature. This could result in the shower temperature becoming noticeably cooler.

For effective thermostatic control the temperature of the hot water entering the mixer should remain a minimum of 10°C above the selected output temperature.

The supply pipework must be flushed to clear debris before connecting to the shower control in accordance with Water Regulations and Bylaws.

DO NOT use jointing compounds on the pipework.

Fig.2 diagrammatic view (not to scale)



TYPICAL SUITABLE INSTALLATIONS

a) Instantaneous gas-heated showers, e.g. combination boilers (fig.2)

The shower control **MUST** be installed with a multipoint gas water heater or combination boiler of a fully modulating design (i.e. where the water draw-off rate indirectly controls the gas flow to the burner). A drop tight pressure reducing valve **MUST** be fitted if the supply pressures exceed 5 bar maintained.

An expansion vessel (shown in **fig.2**) **MUST** be fitted, and regularly maintained, to make sure the unit is not damaged by excess pressures. This may already be installed within the boiler (*check with manufacturer*) and is in addition to the normally larger central heating expansion vessel.

The layout and sizing of pipework must be such that nominally equal inlet supply pressures are achieved and the effects of other draw-offs are minimised. The hot supply temperature **MUST** remain a minimum of 10°C hotter than the required blend temperature for the best performance.

b) Pump assisted gravity fed systems (fig.3)

The pump **MUST** be fed from a cold water cistern and hot water cylinder providing nominally equal pressures. The pump must be capable of maintaining a minimum running pressure of 1 bar.

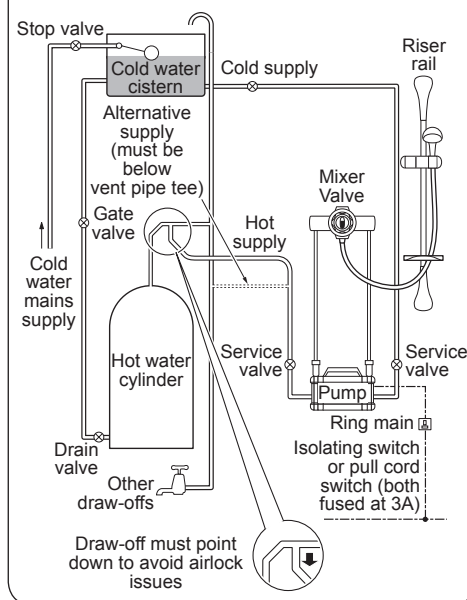
c) Unvented mains pressure showers (fig.4)

The shower control can be installed with an unvented, stored hot water cylinder.

For systems with no cold water take off after the appliance reducing valve, it will be necessary to fit an additional drop tight pressure reducing valve when the mains pressure is over 5 bar. The drop tight pressure reducing valve **MUST** be set at the same value as the unvented package pressure reducing valve.

Note: An additional expansion vessel (**fig.4**) may be required if a second pressure reducing valve is installed. This does not apply to

Fig.3 diagrammatic view (not to scale)



packages with a cold take off after the pressure reducing valve to the cylinder.

The layout and sizing of pipework must be such that nominally equal inlet supply pressures are achieved and the effects of other draw-offs are minimised.

d) Mains pressurised thermal store (fig.5)

Packages of this type, fitted with a tempering valve (blender valve) can be used. A drop tight pressure reducing valve MUST be fitted if the supply pressures exceed 5 bar maintained.

An expansion vessel (shown in **fig.5**) MUST be fitted, and regularly maintained, to make sure the unit is not damaged by excess pressures. This may already be installed externally or internally within the thermal store (check with thermal store manufacturer).

The layout and sizing of pipework MUST be such that nominally equal inlet supply pressures are achieved and the effects of other draw-offs are minimised.

Fig.4 diagrammatic view (not to scale)

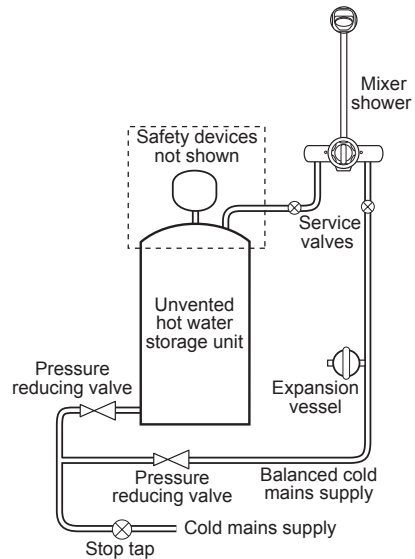


Fig.5 diagrammatic view (not to scale)

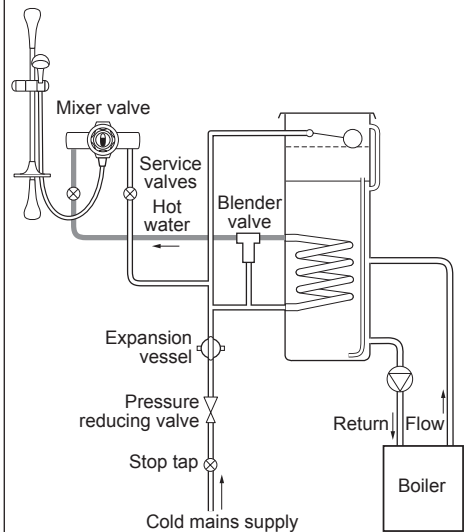
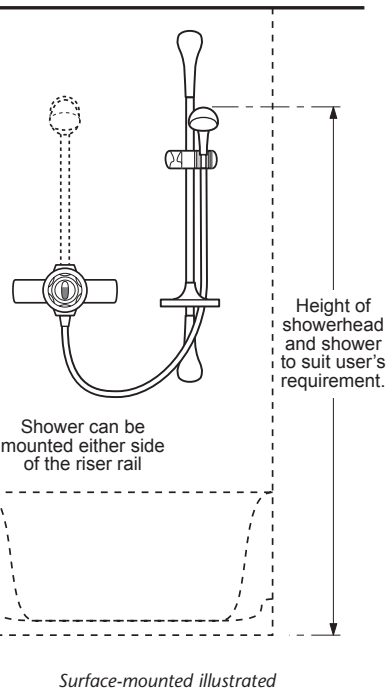


Fig.6 diagrammatic view (not to scale)



PREPARING THE MIXER VALVE

Before starting the installation, make sure all the openings on the valve are carefully covered to prevent ingress of any debris etc.

Note: It is not necessary to remove the control knobs at any stage.

SITING OF THE SHOWER

WARNING!

The shower must not be positioned where it will be subjected to freezing conditions.

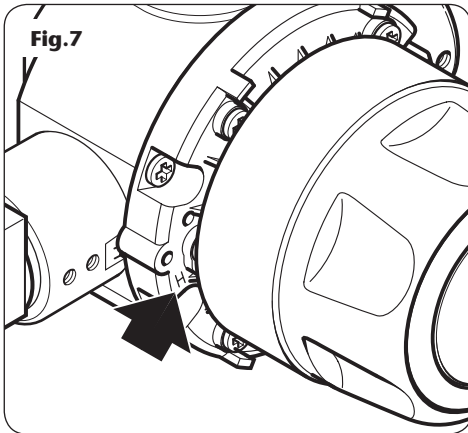
Refer to **fig.6** for correct siting of the shower.

Position the shower and showerhead on the wall so that all controls can be comfortably reached while using the shower. The showerhead and riser rail can be positioned either side of the shower.

Note: Pipe entry for both surface-mounted and flush-fitted valves can be from the top, bottom or rear.

The hot entry port is on the left-hand side of the valve and is marked on the valve with a letter 'H' (**fig.7**).

Fig.7



FITTING THE SHOWER TO THE WALL

Exposed

Note: The outlet of the shower must not be connected to anything other than the hose and showerhead supplied.

DO NOT use jointing compounds on any pipe fittings for the installation.

DO NOT solder fittings near of the shower unit, as heat transfer can damage components.

Note: Suitable isolating valves (complying with Water Regulations) must be fitted on the hot and cold water supplies to the shower as an independent means of isolating water supplies should maintenance or servicing be necessary.

When connecting pipework avoid using tight 90° elbows. Swept or formed bends will give the best performance.

IMPORTANT: The water circuit should be installed such that the flow is not significantly affected by other taps and appliances being operated elsewhere on the premises. Water pressure must not fall below specification of the shower.

Note: The hot water pipe entry must be on the left.

Rising and falling supplies

Having decided on the position of the shower and direction of pipe entry, complete the pipework to the shower area.

Note: The final separation between pipe centres needs to be about 153 mm but absolute accuracy is not needed as the inlet elbows are adjustable between 146 mm and 160 mm.

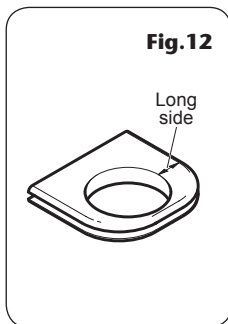
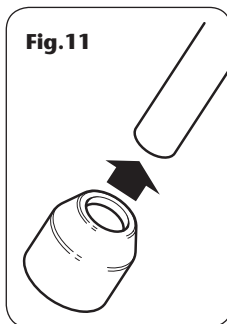
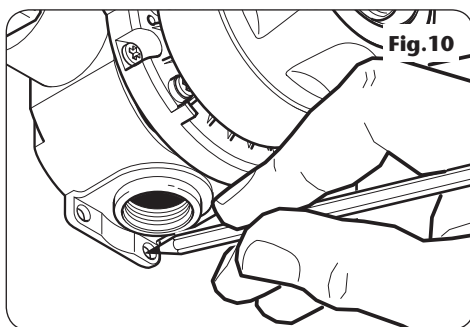
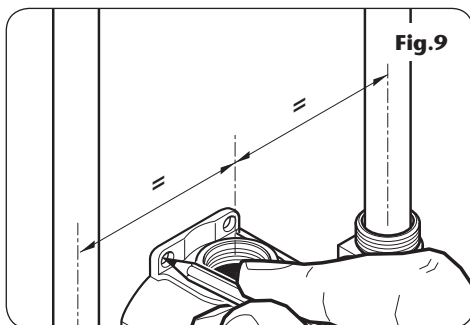
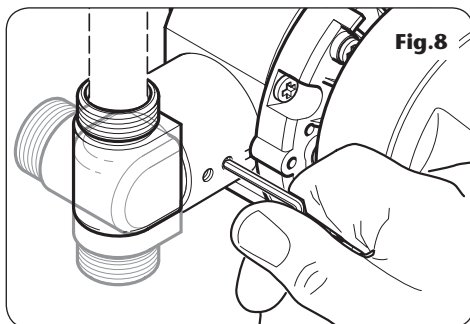
Flush pipework to clear the system of all debris and check for leaks.

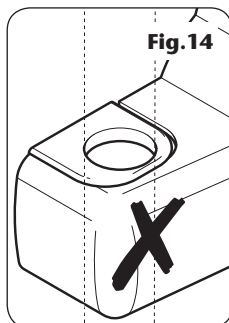
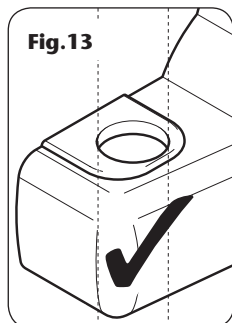
IMPORTANT: The inlet elbows contain check valves that may be damaged if debris is not flushed through prior to fitting.

Where this is not possible refer to the 'flushing procedure' on page 20.

Clip the pipework to the wall surface so that the pipe centres are 21 mm off the wall.

Offer the valve, together with the inlet elbows, to the pipework. Make sure the inlet elbow grub





screws are slack allowing the inlet elbows to rotate to the correct position and move freely in and out of the valve housing (**fig.8**).

Place the valve housing centrally between the two pipes, and mark the two diagonal fixing holes (**figs.9** and **10**).

Remove the valve. Drill and plug the holes. (*The wall plugs supplied are suitable for most brick walls — use an appropriate masonry drill, but if wall is plasterboard or a soft building block, you must use suitable wall plugs and an appropriate drill bit.*)

Fit the nut covers on to the pipes (**fig.11**).

Note: Slide the pipes into the small diameter end of the nut cover. It will not fit if inserted from the other end.

Slide the inlet nuts and olives onto the pipes, followed by the inlet trims.

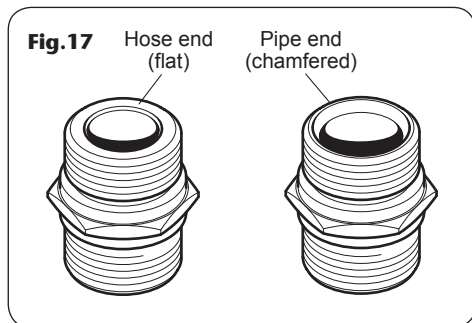
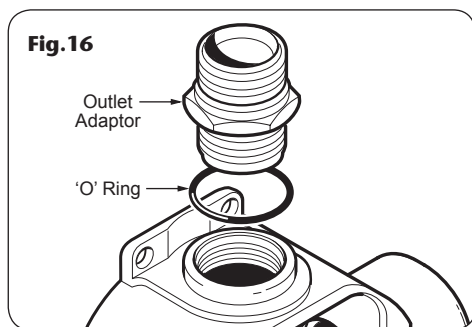
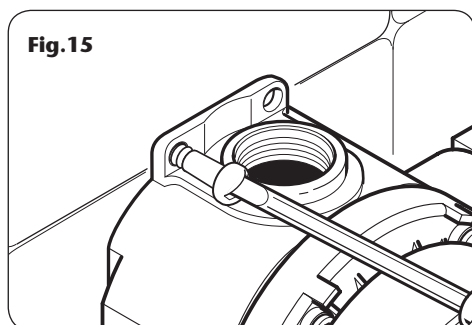
Note: The holes in the inlet trims are offset to allow for adjustable inlet pipe separation widths. If pipe centre separation is 153 mm or less, then have the short side of the inlet trims between the pipes. If the pipe separation gap is 153 mm or greater, have the long side of the inlet trims between the pipes (**fig.12**). If in any doubt try the cover to see if it fits properly (i.e. no visible gaps between the inlet trims and the cover — **fig.13**). If there is a gap (**fig.14**) then reverse the trim.

While trying the cover make sure the inlet nuts are sitting in the holes in the inlet trim holes so that the inlet trims are at the correct separation.

Having positioned the inlet trims correctly, refit the valve to the pipework. Make sure the hot inlet port (marked with the letter 'H' on the valve housing) is connected to the hot pipework which must be on the left.

Screw to the wall with the two screws supplied (**fig.15**). Tighten the inlet nuts and inlet elbow grub screws.

If installing a tamperproof fixed head, fit the outlet adaptor into the top outlet hole in the valve housing (**fig.16**). The adaptor is sealed with an 'O' ring. Make sure the adaptor is fitted with the hose end in the valve housing. Fit the blanking plug into the bottom outlet hole using an 'O' ring to seal it.



If installing a riser rail, fit the outlet adaptor into the bottom outlet hole in the valve housing. The adaptor is sealed with an 'O' ring.

Make sure the adapter is fitted with the pipe end in the valve housing (**fig.17**)

Fit the blanking plug into the top outlet hole using an 'O' ring to seal it (**fig.18**). Make sure both the adaptor and blanking plug do not protrude, and finish flush with the inner face of the housing.

If fitting a tamperproof fixed head, refer to '*Fitting the tamperproof fixed head*' section and complete the outlet pipework as follows:

Determine the required height of pipe and cut to size. Slide nut cover onto the pipe, followed by nut and olive. Insert the pipe into outlet adaptor, place the outlet trim onto the adaptor and fully tighten the compression nut (**fig.19**).

Before securing the tamperproof fixed head to the wall, connect a hose to the pipework and direct to waste.

If fitting a riser rail, connect the shower hose to the outlet and direct to waste.

Open the isolating valves to the shower and flush through making sure the flow control is opened fully and the temperature control is rotated to 'HOT' and then to 'COLD' (if necessary depress the maximum temperature override button). Check for any leaks and remedy if necessary.

Slide the outlet blanking trim onto the cover where it is required i.e. bottom outlet for fixed head, top outlet for a hose (**fig.20**).

Fit the cover on and secure with two screws (**fig.21**). Locate the lugs on the trim ring in the holes on the cover and twist clockwise (**fig.22**). Finally, pull nut covers over nuts.

Complete the fitting of the shower accessories by referring to the appropriate section.

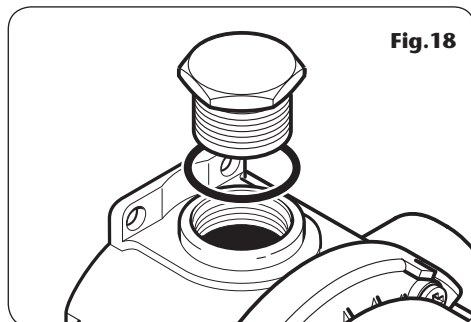


Fig.18

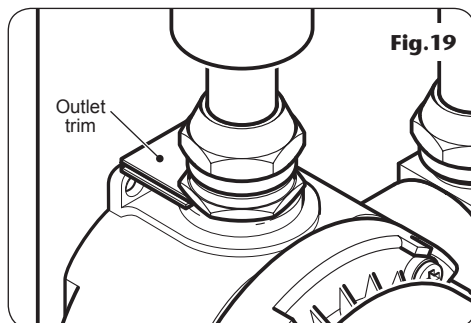


Fig.19

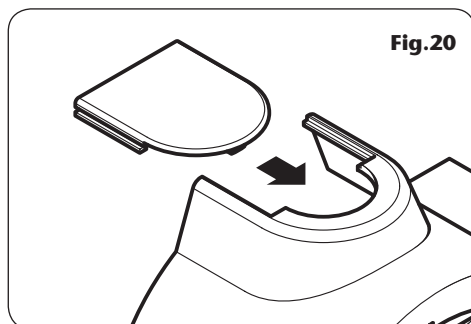


Fig.20

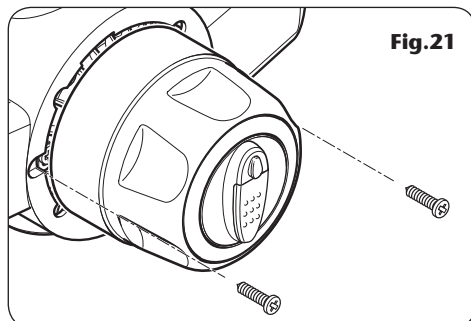
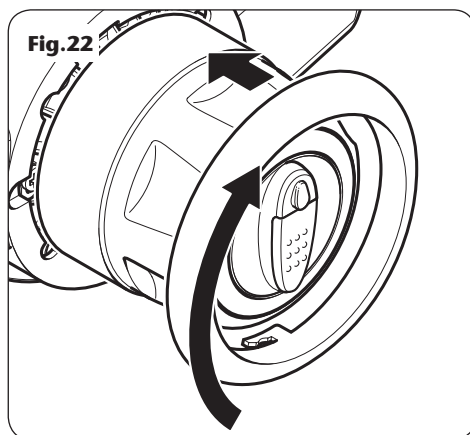


Fig.21



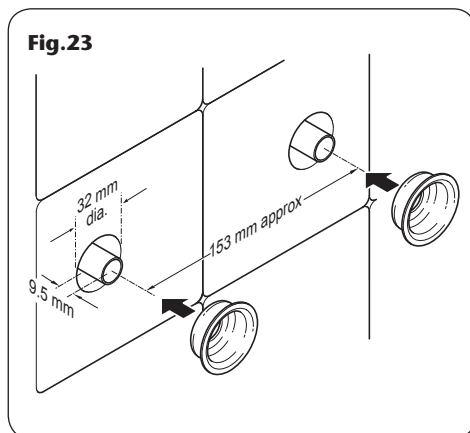
Rear entry supplies

Note: The final separation between pipe centres needs to be about 153 mm but absolute accuracy is not essential as the inlet elbows are adjustable between 146 mm and 160 mm (**fig.23**).

Using a spirit level, mark the route of incoming hot and cold water supply pipes at a distance of 153 mm centres.

Remove the plaster and brickwork to the required depth to conceal the supply pipework.

Note: It is advisable that pipework installed in solid walls be provided with enough free play inside a cavity to allow entry into the inlet elbows for tightening, before securing the valve to the finished wall surface.



Install the hot and cold pipework — the hot pipe must enter from the left. Make sure the finished pipework projects from the front face of the tiled surface of the wall by 9.5 mm (**fig.24**).

Allow for two circular recesses measuring 32 mm diameter by 14 mm depth, to accept the rear entry pipe trims (**fig.23**).

Flush pipework to clear the system of all debris and check for leaks.

IMPORTANT: The inlet elbows contain check valves that may be damaged if debris is not flushed through prior to fitting.

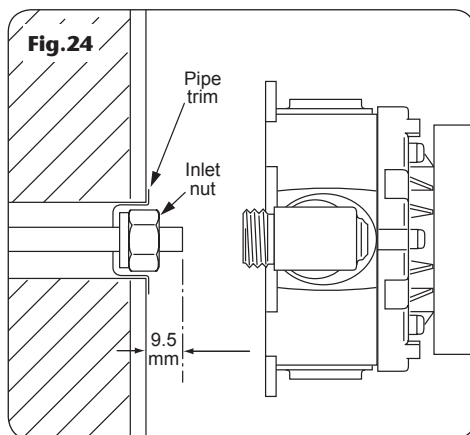
Where this is not possible refer to the 'flushing procedure' on page 20.

Make good the wall and complete the tiling. Check that the rear entry pipe trims are sealed in with either silicon sealant or grout (**fig.24**).

Note: Failure to fit the rear entry pipe trims could result in the entry of water into the wall cavity.

Offer the valve, together with the inlet elbows, to the pipework making sure the inlet elbow grub screws are slack allowing the inlet elbows to be rotated to the correct position and move freely in and out of the valve housing (**fig.8**).

Check that the valve is central between the two pipes, then mark two diagonal fixing holes (**figs.25 and 26**).



Remove the valve. Drill and plug the holes using the wall plugs supplied.

Using two hexagonal nuts (supplied), refit the valve to the pipework. Make sure the hot inlet port (marked with the letter 'H' on the valve housing) is connected to the hot pipework which must be on the left.

Tighten the inlet nuts with the spanner supplied (**fig.27**) then tighten the inlet elbow grub screws.

Screw to the wall with the screws supplied.

If installing a tamperproof fixed head, fit the outlet adaptor into the top outlet hole in the valve housing (**fig.16**). The adaptor is sealed with an 'O' ring. Make sure the adaptor is fitted with the hose end in the valve housing (**fig.17**). Fit the blanking plug into the bottom outlet hole using an 'O' ring to seal it.

If installing a riser rail, fit the outlet adaptor into the bottom outlet hole in the valve housing. The adaptor is sealed with an 'O' ring. Make sure the adaptor is fitted with the pipe end in the valve housing (**fig.17**).

Fit the blanking plug into the top outlet hole using an 'O' ring to seal it (**fig.18**).

If fitting a tamperproof fixed head, refer to 'Fitting the tamperproof fixed head' section and complete the outlet pipework as follows:

Determine the required height of pipe and cut to size if necessary. Slide nut cover on to the pipe, followed by nut and olive. Insert pipe into outlet adaptor, place the outlet trim onto the adaptor and fully tighten the compression nut (**fig.19**).

Before securing the fixed head to the wall, connect a hose to the pipework and direct to waste.

If fitting a riser rail, connect the shower hose to the outlet and direct to waste.

Open the isolating valves to the shower and flush through, making sure the flow control is opened fully and the temperature control is rotated to 'HOT' and then to 'COLD' (if necessary depress the maximum temperature override button). Check for any leaks and remedy if necessary.

Slide the outlet blanking trim onto the cover

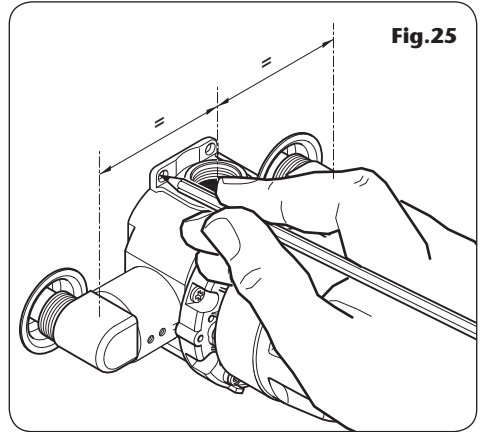


Fig.25

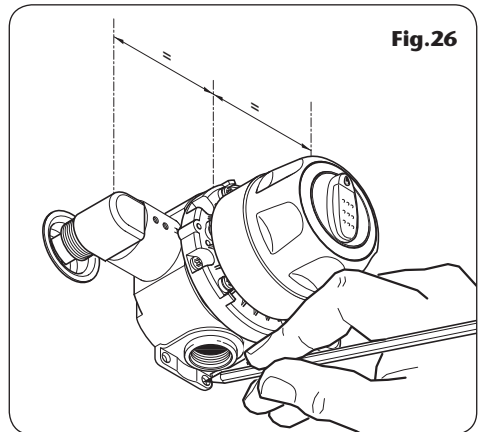


Fig.26

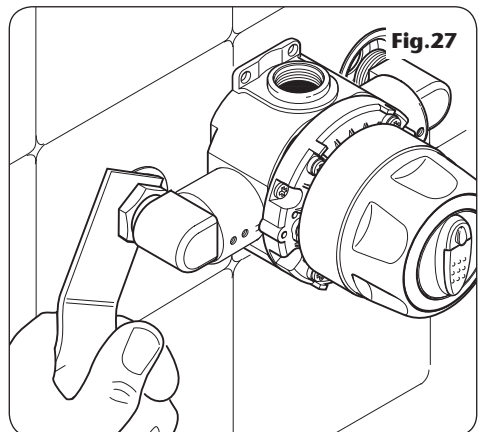
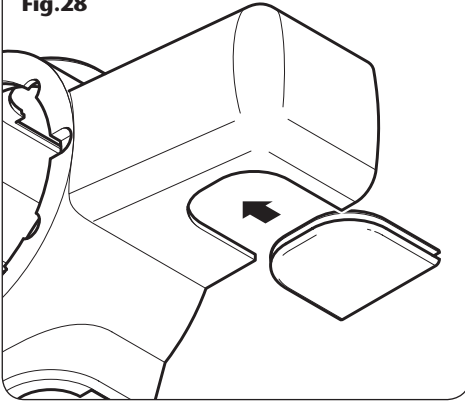


Fig.27

Fig.28



Note: The flush-fitted shower valve comes complete with a built-in pvc shroud. DO NOT remove it. It is important when making good the wall after installation, the plastering and sealing must be made tight up to the shroud in order to prevent ingress of water.

where it is required i.e. bottom outlet for fixed head, top outlet for a hose (**fig.20**).

Fit the inlet blanking trims on the underside of the cover (**fig.28**).

Fit the outlet trim over the outlet adaptor and slide the cover on (**fig.19**). Secure the cover with two screws (**fig.21**). Locate the lugs on the trim ring in the holes on the cover and twist clockwise (**fig.22**).

Complete the fitting of your shower accessories.

FITTING THE SHOWER TO THE WALL

Flush fit

Note: The outlet of the shower must not be connected to anything other than the hose, showerhead or fixed showerhead supplied.

DO NOT use jointing compounds on any pipe fittings for the installation.

DO NOT solder fittings near of the shower unit, as heat transfer can damage components.

Note: Suitable isolating valves (complying with Water Regulations) must be fitted on the hot and cold water supplies to the shower as an independent means of isolating water supplies should maintenance or servicing be necessary.

When connecting pipework avoid using tight 90° elbows. Swept or formed bends will give the best performance.

IMPORTANT: The water circuit should be installed such that the flow is not significantly affected by other taps and appliances being operated elsewhere on the premises. Water pressure must not fall below the specification of the valve.

The hot water pipe entry must be on the left-hand side.

This mixer valve also includes a wall bracket which allows the installer to mount the shower into a solid, stud partition or other hollow wall structures. The bracket can also be used for fitting in a shower cubicle providing the back of the cubicle is accessible.

When installing into a stud partition or other hollow wall structure the installer may wish to consider building rear supports or other options. Such options are beyond the scope of this guide.

Solid wall

The building-in depth for the shower into a solid wall is between 57 mm and 66 mm. The building-in depth calculation must include the thickness of the plaster and tiles. This dimension determines how much of the shower control is visible through the concealing plate when the installation is completed.

Decide on the shower position and whether the hot and cold water supplies will enter the

Fig.29

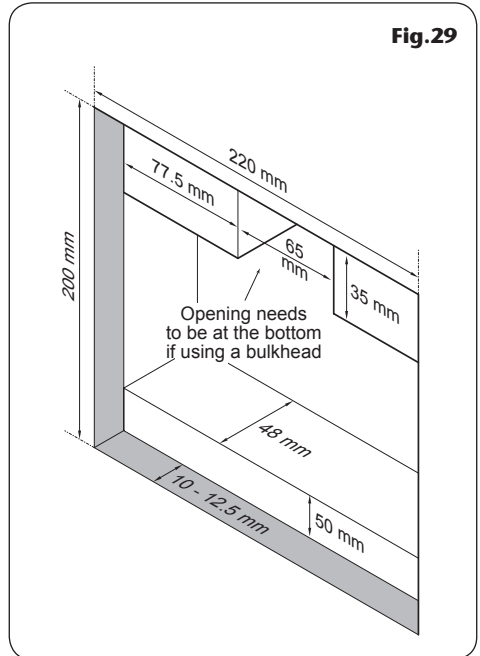
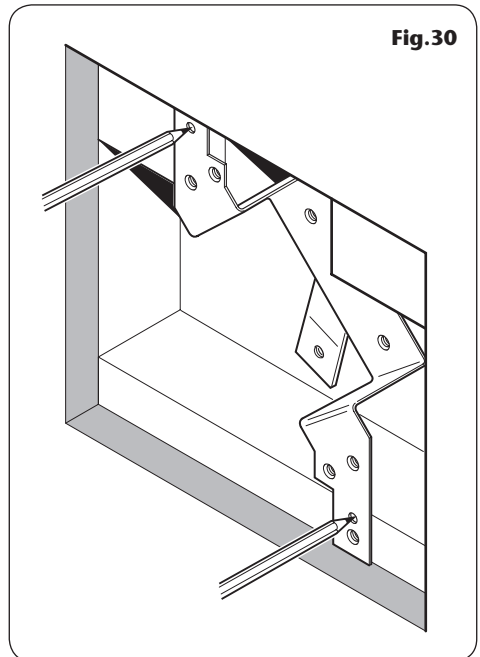
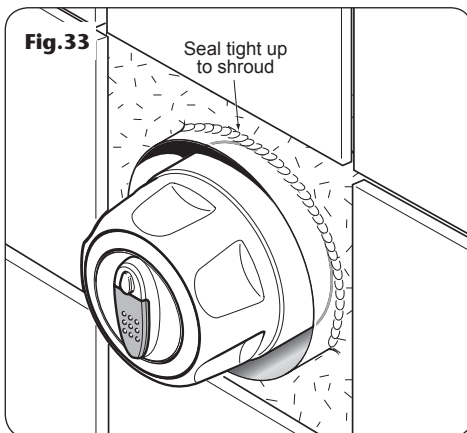
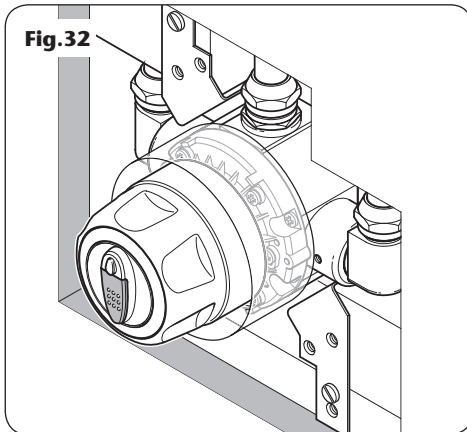
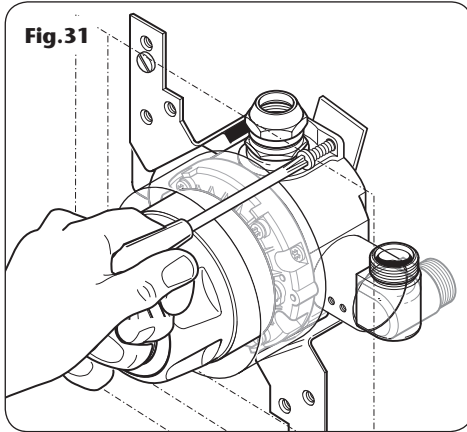


Fig.30





shower from the top (falling), the bottom (rising) or the rear.

Mark the route of the incoming and outgoing pipework.

Note: The final separation between pipe centres needs to be about 153 mm but absolute accuracy is not essential as the inlet elbows are adjustable between 146 mm and 160 mm.

Remove the plaster and brickwork to the depth shown (**fig.29**). Where applicable, chase out any additional areas of the wall for the pipework to either the bulkhead or fixed head.

Offer the mounting bracket up to the wall and mark the two plain fixing holes (**fig.30**). Drill and plug then screw bracket to the wall.

Note: The valve can be fitted to the mounting bracket if required or secured directly to the wall with the screws supplied.

If installing a fixed head, the outlet adaptor needs to be fitted into the top outlet hole in the valve housing (**fig.16**). The adaptor is sealed with an 'O' ring. Make sure the adaptor is fitted with the hose end (**fig.17**) in the valve housing. Fit the blanking plug into the bottom outlet hole using an 'O' ring to seal it.

If fitting a bulkhead outlet, the outlet adaptor needs to be fitted into the bottom outlet hole in the valve housing. The adaptor is sealed with an 'O' ring. Make sure the adaptor is fitted with the hose end in the valve housing (**fig.17**).

Fit the blanking plug into the top outlet hole using an 'O' ring to seal it (**fig.18**).

Make sure the inlet elbows are positioned correctly. Offer the valve up to the mounting bracket or wall surface, and secure using the screws provided (**fig.31**).

Complete the pipework to the shower marking off the length to enter the elbows. Remove the valve and cut the pipes to length.

Flush pipework to clear the system of all debris and check for leaks.

IMPORTANT: The inlet elbows contain check valves that may be damaged if debris is not flushed through prior to fitting.

Where this is not possible refer to the 'flushing procedure' on page 20.

Refit the valve to the mounting bracket/wall surface and pipework (**fig.32**). Tighten the inlet nuts and inlet elbow grub screws.

If fitting a fixed head, refer to the 'Fitting the fixed head' section and complete the outlet pipework to the fixed head position.

Note: The outlet pipe for the fixed head should protrude from the surface of the wall between 50 mm and 65 mm. Before fitting the fixed head to the wall, connect a hose to the pipework and direct to waste.

If fitting a riser rail kit, refer to 'Fitting the bulkhead' and complete outlet pipework.

Before fitting the bulkhead to the wall connect the shower hose and direct it to waste.

Open the isolating valves to the shower and flush through checking that the flow control is opened fully and the temperature control is rotated to 'HOT' and then 'COLD' (if necessary depress the maximum temperature override button). Check for leaks and remedy if necessary.

If a fixed head is installed, make good the outlet pipe channel.

Note: If fitting a fixed head, the tiling around the outlet pipe must be as tight as possible so that the special lock washer will seat, otherwise a larger diameter washer will have to be placed behind the lock washer.

Make good the wall surface around the valve and make sure the plastering/sealing is taken tight to the PVC shroud (**fig.33**).

Should the shroud protrude beyond the wall surface, trim flush with a sharp knife (**fig.34**).

Offer the flush mount plate up to the finished tile surface and making sure the valve and plate are aligned, mark the 'arrowed' fixing holes (**fig.35**). Remove the flush mount plate then drill and plug holes.

Break off the alignment tabs on the flush mount plate (**fig.36**). Place a ring of silicon sealant round the plate so that the plate seals against the wall. Secure the plate to the wall using the screws provided. Wipe off any excess sealant.

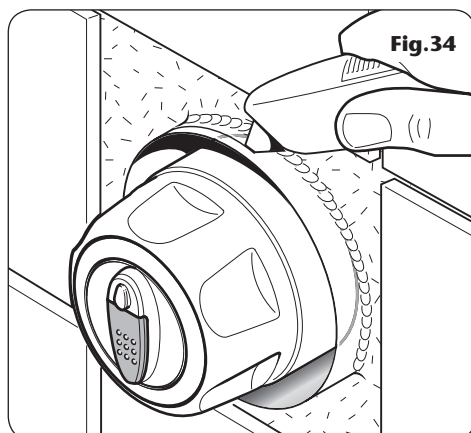


Fig.34

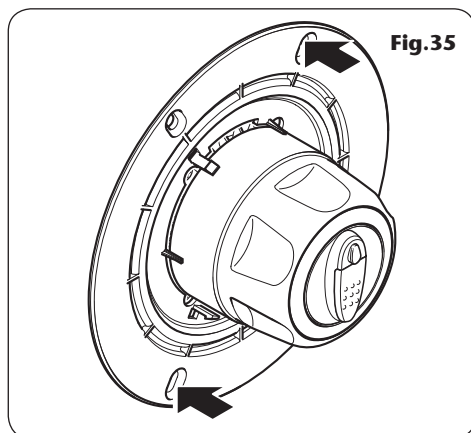


Fig.35

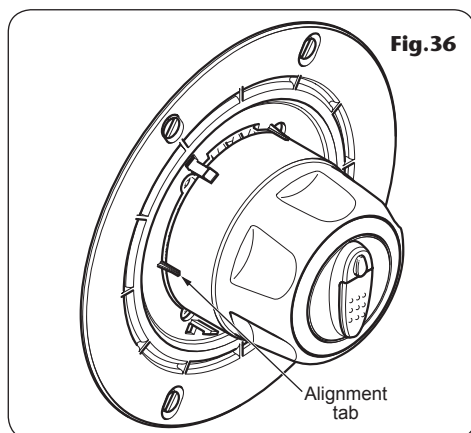
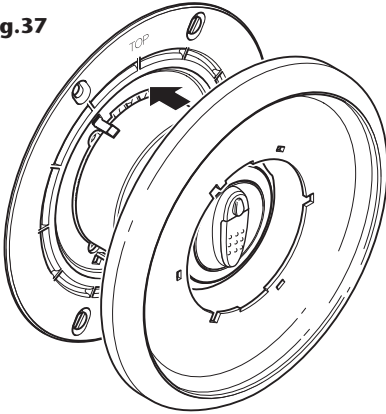


Fig.36

Fig.37



Fit the flush mount cover (**fig.37**). Locate the lugs on the trim ring in the holes on the cover (**fig.38**) and twist clockwise.

Complete the fitting of your shower accessories.

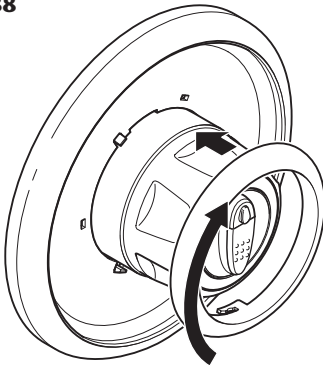
Hollow wall

The wall mounting bracket supplied with the shower is suitable for use on a plasterboard wall of 9.5 mm or 12.5 mm in thickness.

Decide on the shower position and whether the hot and cold water supplies will enter the shower from the top (falling), the bottom (rising) or the rear.

Mark an opening as shown plus the route of inlet and outlet pipework (**fig.39**).

Fig.38



Note: The final separation between pipe centres needs to be about 153 mm but absolute accuracy is not essential as the inlet elbows are adjustable between 146 mm and 160 mm.

Take out the plasterboard and offer the mounting bracket up to the wall (**fig.40**). Mark the outer fixing holes and drill. Insert the wall bracket into wall cavity and secure using the bolts and washers provided (**fig.41**).

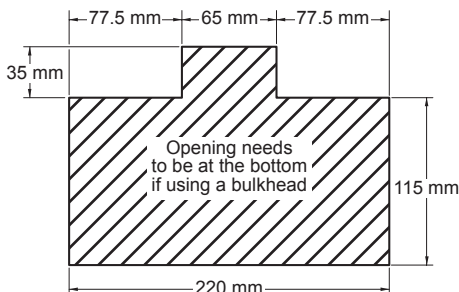
If a fixed head is to be installed, the outlet adaptor needs to be fitted into the top outlet hole in the valve housing (**fig.16**). The adaptor is sealed with an 'O' ring. Make sure the adaptor is fitted with the hose end in the valve housing (**fig.17**). Fit the blanking plug into the bottom outlet hole using an 'O' ring to seal it.

If a bulkhead outlet is to be fitted, the outlet adaptor needs to be fitted into the bottom outlet hole in the valve housing. The adaptor is sealed with an 'O' ring (**fig.16**). Make sure the adaptor is fitted with the hose end in the valve housing (**fig.17**). Fit the blanking plug into the top outlet hole using an 'O' ring to seal it (**fig.18**).

If installing a fixed head, make a hole in the wall for the fixed head pipe.

Note: If fitting a fixed head, the hole in the wall for the pipe must be close to 15 mm diameter as possible. It must not exceed the diameter of the special lock washer, otherwise a larger diameter washer will have to be placed behind the lock

Fig.39



washer.

Make sure the inlet elbows are positioned the correct way. Offer the valve up to the mounting bracket and secure using the screws provided (**fig.42**).

Complete the pipework to the shower marking off the length to enter the elbows. Remove the valve and cut the pipes to length.

Flush pipework to clear the system of all debris and check for leaks.

IMPORTANT: The inlet elbows contain check valves that may be damaged if debris is not flushed through prior to fitting.

Where this is not possible refer to the 'flushing procedure' on page 20.

Refit the valve to the mounting bracket and pipework. Tighten the inlet nuts and inlet elbow grub screws.

If fitting a fixed head, refer to the 'Fitting the fixed head' section and complete the outlet pipework to the fixed head position.

Note: The outlet pipe for the fixed head should protrude from the surface of the wall between 50 mm and 65 mm. Before fitting the fixed head to the wall, connect a hose to the pipework and direct to waste.

If fitting a riser rail kit refer to 'Fitting the bulkhead' and complete the outlet pipework. Before fitting the bulkhead to the wall, connect the shower hose and direct it to waste.

Open the isolating valves to the shower and flush through. Make sure the flow control is opened fully and the temperature control is rotated to 'HOT' and then to 'COLD' (if necessary depress the maximum temperature override button). Check for leaks and remedy if necessary.

Make good the wall surface and make sure the plastering/sealing is taken tight to the PVC shroud (**fig.43**). Should the shroud protrude beyond the wall surface, trim flush with a sharp knife (**fig.34**).

Offer the flush mount plate up to the finished surface. Make sure the valve and the plate are aligned and mark the 'arrowed' fixing holes (**fig.35**). Remove the flush mount plate then

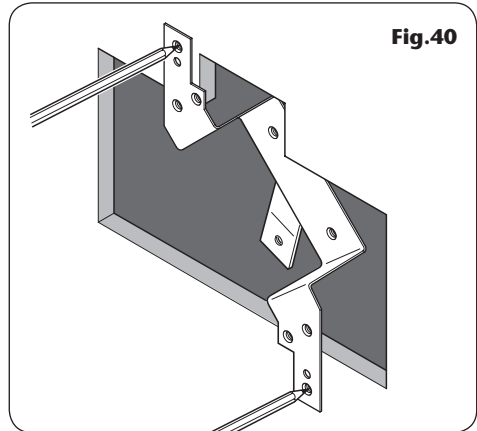


Fig.40

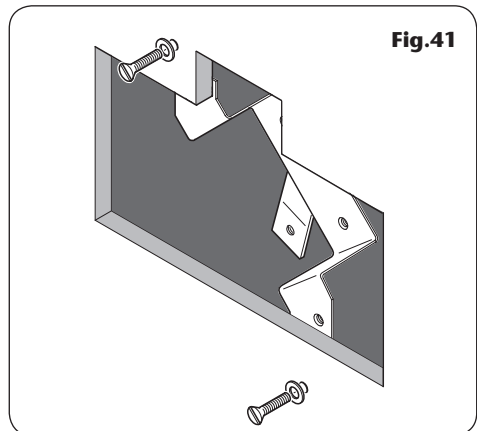


Fig.41

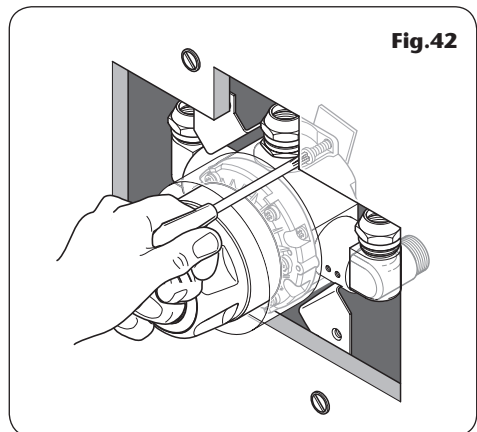
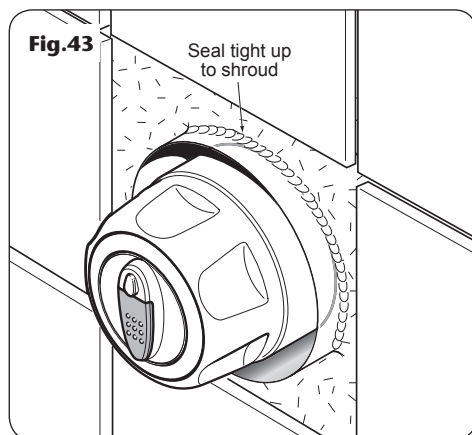


Fig.42



drill and plug the holes.

Note: If fitting to plasterboard, use suitable cavity fixings.

Break off the alignment tabs on the flush mount plate (**fig.36**). Place a ring of silicon sealant round the plate so that the plate seals against the wall. Secure the plate to the wall using the screws provided. Wipe off any excess sealant.

Fit the flush mount cover (**fig.37**). Locate the lugs on the trim ring in the holes on the plate and twist clockwise (**fig.38**).

Complete the fitting of your shower accessories by referring to the appropriate section.

Shower cubicle or panel

To use the wall mounting bracket supplied with a shower cubicle or a laminated panel, wooden blocks are required to increase the depth of the bracket. These blocks need to increase the depth of the bracket to between 56 mm and 67 mm from the finished surface (**fig.44**).

Decide on the shower position and whether the hot and cold water supplies will enter the shower from the top (falling), the bottom (rising) or the rear.

Mark the wall for an opening of about 93 mm diameter.

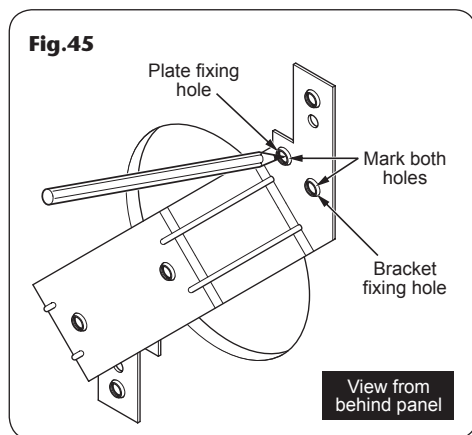
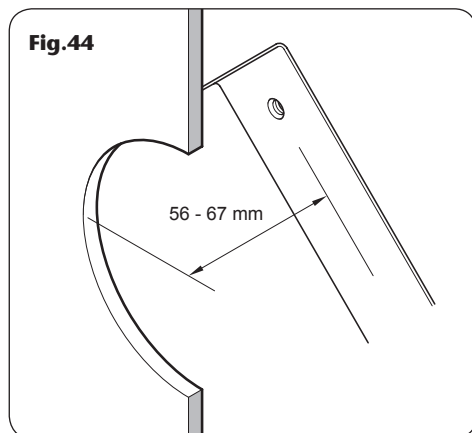
Cut the opening and offer the mounting bracket up to the back of the panel (**fig.45**). Mark the inner fixing holes and drill the panel and wooden support blocks.

If installing a fixed head, fit the outlet adaptor into the top outlet hole in the valve housing (**fig.16**). The adaptor is sealed with an 'O' ring. Make sure the adaptor is fitted with the hose end in the valve housing (**fig.17**). Fit the blanking plug into the bottom outlet hole using an 'O' ring to seal it.

If installing a bulkhead outlet, fit the outlet adaptor into the bottom outlet hole in the valve housing. The adaptor is sealed with an 'O' ring.

Make sure the adaptor is fitted with the hose end in the valve housing (**fig.17**). Fit the blanking plug into the top outlet hole using an 'O' ring to seal it (**fig.18**).

Make sure that the inlet elbows are facing the



correct way. Offer the valve up to the mounting bracket and secure using the screws provided.

Secure the mounting bracket together with the valve to the panel using two bolts in the innermost fixing holes (**fig.46**).

Complete the pipework to the shower marking off the length to enter the elbows. Remove the valve and mounting bracket and cut the pipes to length.

If fitting a fixed head, make a hole in the panel for the fixed head position.

Note: Make sure the hole in the panel for the outlet pipe is no larger than required (either 1/2" BSP or 15 mm).

Should the shroud protrude beyond the wall surface, trim flush with a sharp knife (**fig.34**).

Place a ring of silicon sealant round the flush mount plate up to the finished surface. Make sure the valve and plate are aligned, and secure in the outer fixing holes using the two bolts supplied (**fig.47**).

Break off the alignment tabs on the flush mount plate (**fig.36**) and fit the flush mount cover (**fig.48**).

Locate the lugs on the trim ring in the holes on the cover and twist clockwise (**fig.49**).

Complete the fitting of your shower accessories.

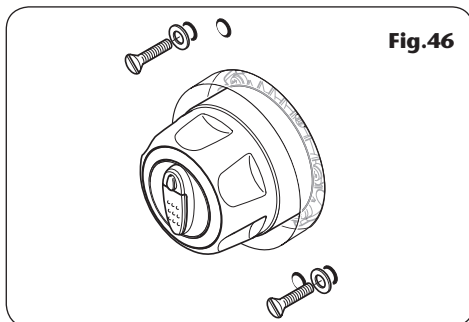


Fig.46

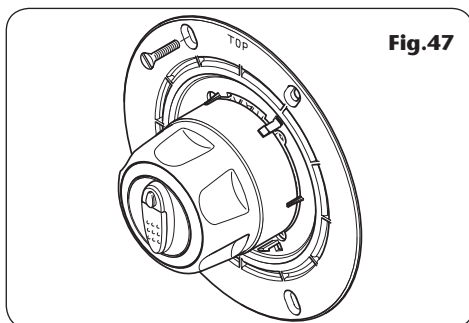


Fig.47

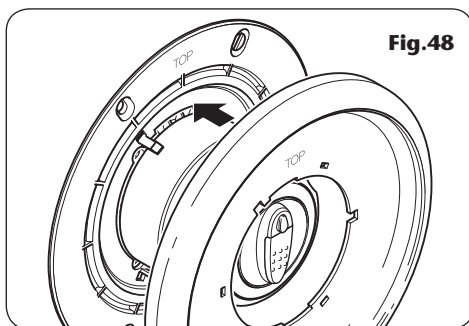


Fig.48

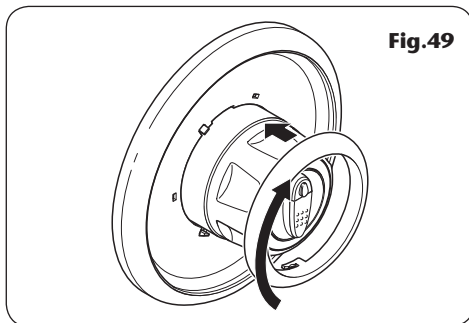
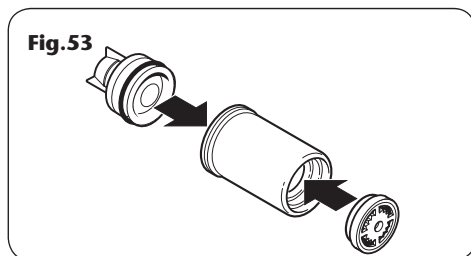
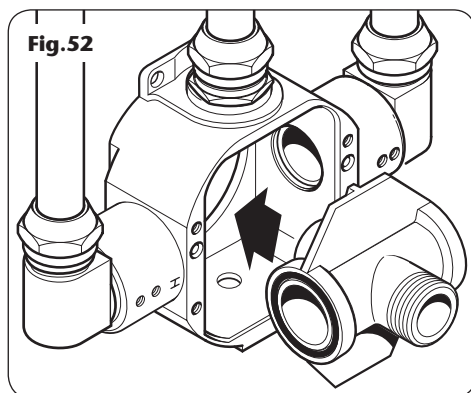
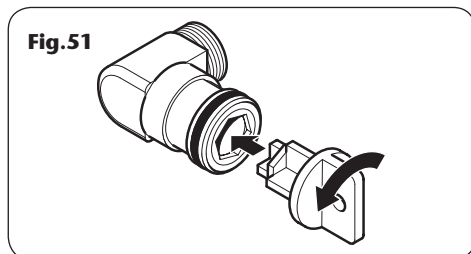
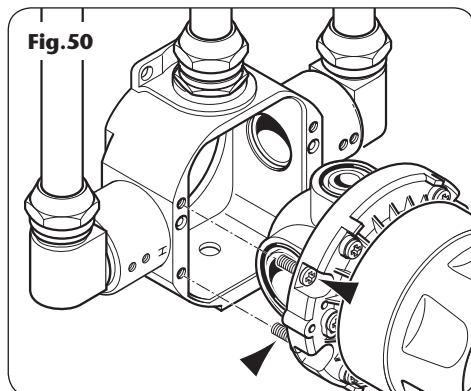


Fig.49



FLUSHING PROCEDURE

Removal and/or fitting of check valves for maintenance

IMPORTANT: It is preferable to flush the pipework before installing the valve. Where this is not possible, the procedure using a flushing cartridge should be followed.

- a. Isolate the supplies.
- b. Remove the trim ring by twisting anti-clockwise.
- c. Remove the valve cover.
- d. Remove the four screws holding the valve cartridge, and carefully remove the cartridge assembly from housing (**fig.50**).
- e. Insert the plastic tool provided into the inner sleeve located inside the elbow and twist anti-clockwise (**fig.51**). Take care not to damage the check valve.
- Note:** The sleeve may stick, in which case it must be carefully hooked out using a suitable tool such as an allen key.
- f. Push the flushing cartridge into the housing (**fig.52**). Attach a hose to the flushing cartridge outlet and make sure it is directed to waste. Flush the pipes clean.
- g. Wash out the sleeve and check valve. Take care not to damage them.
- h. Replace the check valve into the sleeve, making sure it is in the correct way (**fig.53**).
- i. Refit sleeve into the elbow. Carefully replace the valve cartridge and refit the cover.
- j. Reinstall supplies and test the valve operation.

Note: It may be necessary to service the check valves at regular intervals to prevent cross flow of water.

Note: Flushing cartridges and replacement check valve tools are available from Triton Customer Service.

Flush the pipework to clear system of debris and check for leaks.

FITTING THE TAMPERPROOF FIXED HEAD

(Exposed option only)

Complete the outlet pipework from the valve and cut the pipe to required length.

Place the fixed head unit on top of the pipe work and mark the position of the three fixing holes (**fig.54**).

Drill and plug the holes using the plugs supplied.

Secure the pipe to the fixed head unit using the compression nut and olive supplied (**fig.55**).

Secure the fixed head to the wall with the three screws supplied (**fig.56**).

Screw on the adjustable showerhead. Make sure the supplied flat sealing washer is in place (**fig.57**).

Note: The showerhead must be screwed on tight to make sure of a watertight connection. Use a suitable tool if necessary.

Using the allen key supplied, lock the showerhead in position by tightening the grub screw (**fig.58**).

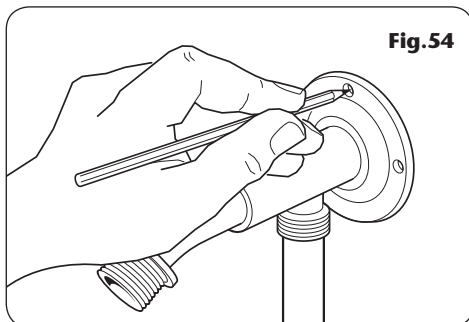


Fig.54

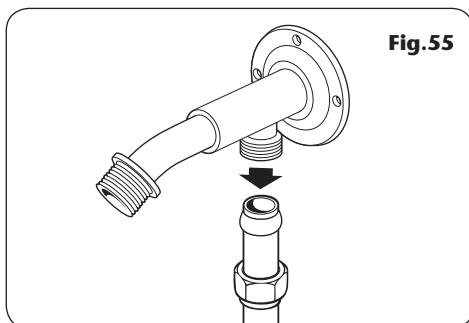


Fig.55

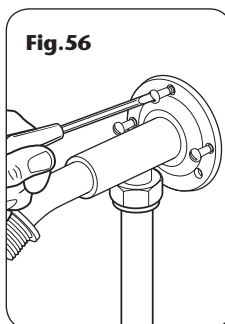


Fig.56

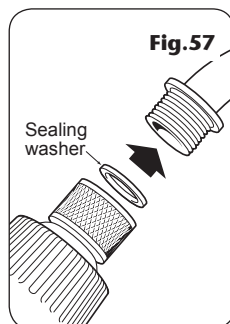


Fig.57

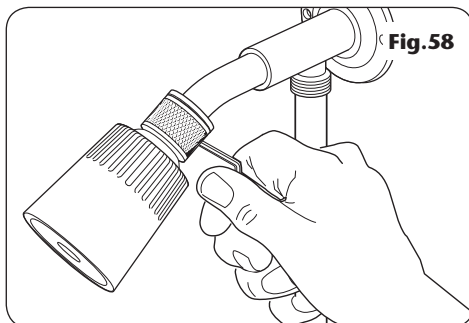


Fig.58

Fig.59

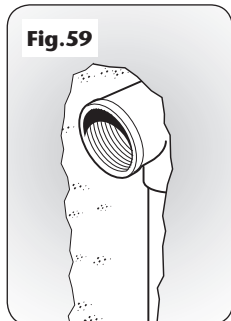
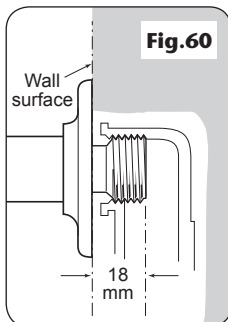


Fig.60



FITTING THE TAMPERPROOF FIXED HEAD

(Built in option only)

Complete outlet pipework from the valve ending in a 1/2" BSP female threaded fitting (not supplied) (**fig.59**).

Note: The depth of thread on the fixed head unit from wall surface is 18 mm (**fig.60**). It is advisable that pipework installed in solid walls be provided with enough free play inside a cavity to allow any slack to be accommodated.

Make good the wall

Screw the fixed head assembly to the female fitting. Screw tight to the wall and make sure fixed head is in the correct attitude.

Mark the position of the three fixing holes (**fig.61**). Remove the fixed head. Drill and plug the holes using the plugs supplied.

Screw the fixed head assembly to the female fitting using PTFE tape to seal the joint. Secure the fixed head to the wall with the three screws supplied (**fig.62**).

Screw on the adjustable showerhead, making sure the supplied flat sealing washer is in place (**fig.63**).

Note: The showerhead must be screwed on tight in order to make sure of a watertight connection. Use a suitable tool if necessary.

Using an allen key, lock the showerhead in position by tightening the grub screw (**fig.64**).

Fig.61

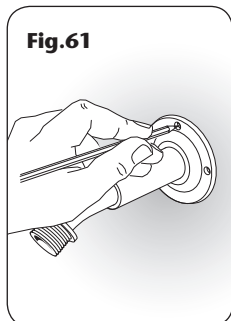


Fig.62

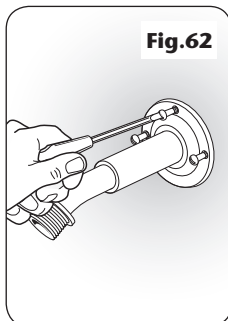


Fig.63

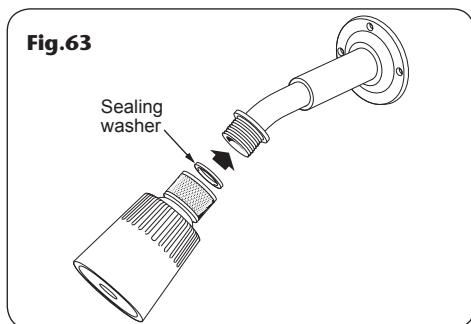
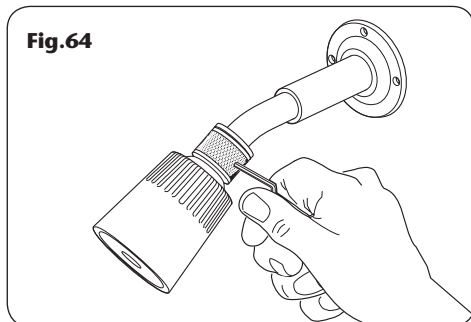


Fig.64



FITTING THE FIXED HEAD

(Built in option only)

The outlet pipe should protrude from the surface of the wall between 50 mm and 65 mm (**fig.65**).

Mark four fixing hole positions by using the fixed arm as a template. Drill and plug the wall using the plugs supplied. Care must be taken not to drill into the buried pipework.

Remove burrs on the pipework to prevent damage to the 'O' ring.

Slide the special lock washer over the pipe and push it tight to the wall.

Note: Make sure the lock washer is placed on the pipe correctly with the inscription 'FRONT' facing away from the wall. This washer holds the pipe in position.

Slide the bushing over the pipe and push it tight against the wall.

Slide the 'O' ring onto the pipe up against the bushing.

Push the fixed arm assembly onto the pipe tight to the wall. An automatic watertight seal is thus created.

Secure to the wall with the four fixing screws supplied. Push-fit the trim into place (**fig.66**).

Finally, screw on the adjustable showerhead making sure the sealing washer is in place (**fig.67**). Screw on tight to make sure of a watertight connection.

Turn on the water supplies.

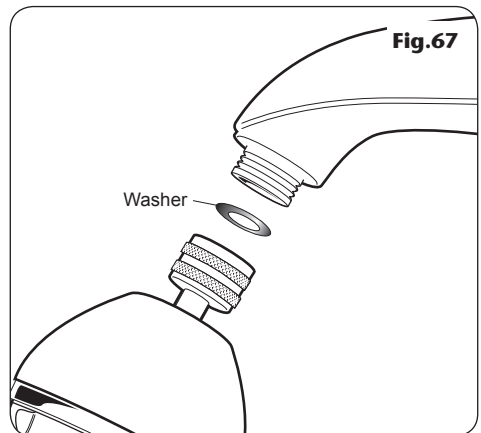
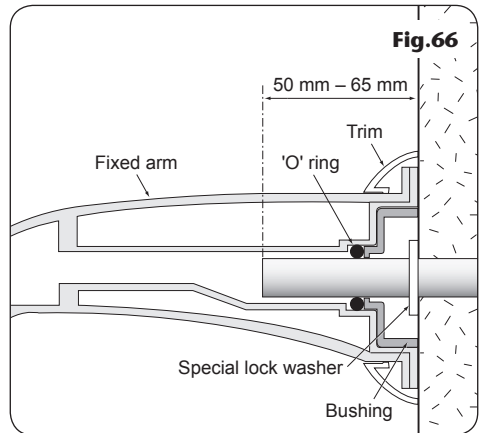
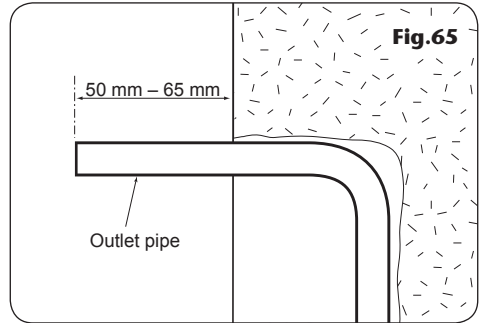


Fig.68

Appropriate fitting

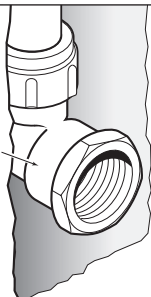


Fig.69

Finished surface
8mm - 13mm

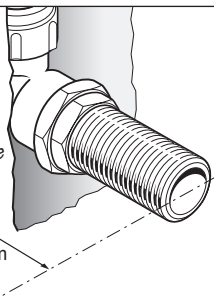


Fig.70

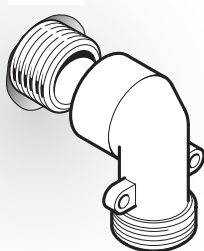


Fig.71

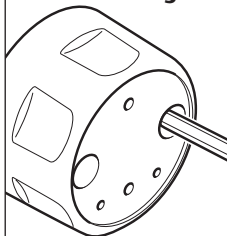


Fig.72

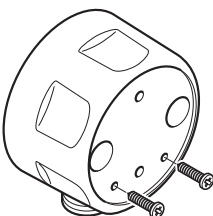
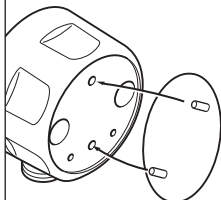


Fig.73



FITTING THE BULKHEAD

(Riser rail option only)

Complete the outlet pipework ending in a 1/2" x 15 mm female thread fitting (**fig.68**).

Note: This fitting is not supplied as variations in installations needs the selection of the most suitable fitting.

Screw the supplied male-thread connector into the female fitting using PTFE tape to make sure of a watertight joint (**fig.69**).

Note: The supplied male-thread connector has a nutted shoulder. If fitting to a flush wall, make an additional 8 mm allowance for this shoulder at the finished surface. The connector can be cut to size if required.

The threaded connector should protrude from the wall surface between 8 mm and 13 mm.

Make good the wall.

Screw the bulkhead elbow to the threaded connector using PTFE tape to seal the thread (**fig.70**).

Slide the bulkhead over the elbow, offer up to the wall and mark the two fixing holes for securing the bulkhead to the wall (**fig.71**).

Remove the bulkhead then drill and plug the holes using the plugs supplied.

Refit the bulkhead and secure to the elbow using two screws (**fig.72**).

Secure the bulkhead to the wall using the two fixing screws supplied. Push on the trim disc making sure the two location lugs locate in the small holes as shown (**fig.73**).

OPERATING THE SHOWER

Make sure all plumbing supplies are connected and turned on.

Starting the shower

To start the shower, turn the outer knob (flow control) anti-clockwise (**fig.74**).

Adjusting the shower temperature

To adjust the temperature, turn the inner knob — temperature control (**fig.75**). The temperature disc is numbered for ease of use and ranges from 1 (fully cold) to 10 (fully hot).

Once at the preferred temperature, no further adjustment is required, providing the hot and cold water supplies remain constant.

Stopping the shower

To stop the shower, turn the flow control clockwise to the stop position (**fig.76**). This automatically stops the water flow.

As a safety measure the shower has a built-in maximum temperature stop to prevent accidentally exceeding the highest desired temperature. The stop comes in a factory set position. (If adjustment is required see 'Adjusting the maximum temperature stop' on page 26).

To override this stop, depress the button and turn the control clockwise to the higher settings (**fig.77**). To return to the normal temperature range just turn the temperature control anti-clockwise until it is past the maximum temperature stop.

Make sure that the temperature control is in the normal temperature range when the shower is turned off.

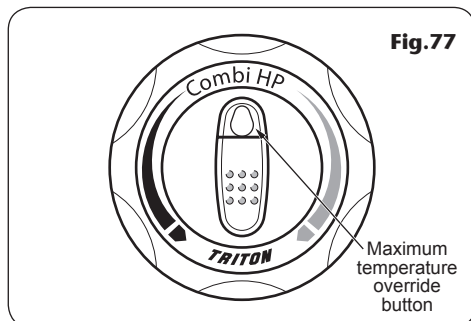
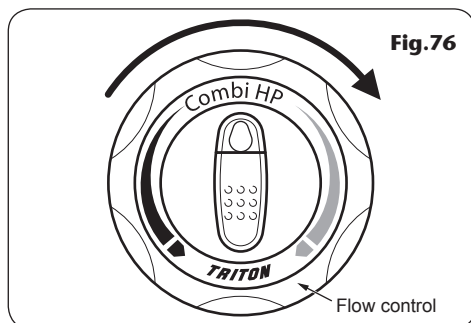
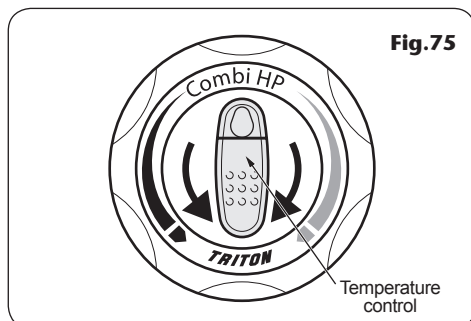
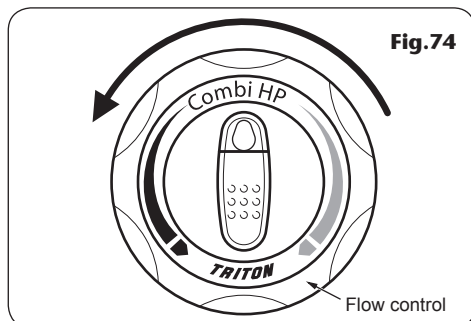


Fig.78

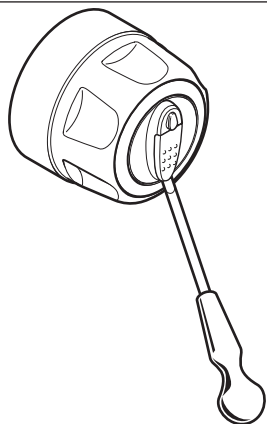


Fig.79

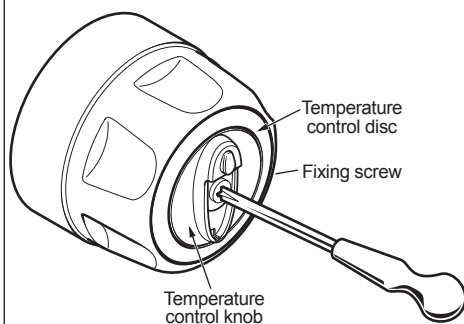
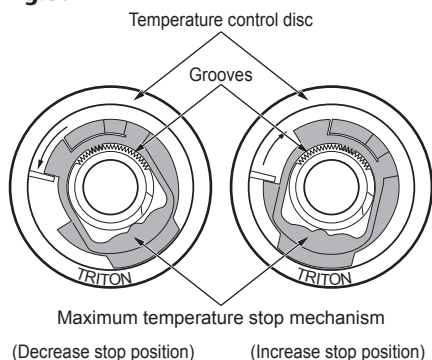


Fig.80



ADJUSTING THE MAXIMUM TEMPERATURE STOP

As a safety measure the shower has a built-in maximum temperature stop to prevent you accidentally exceeding your highest desired temperature. This is set in the factory to provide a maximum temperature of 42°C based on the hot and cold water supplies being 65°C and 15°C respectively at nominally equal pressures.

Procedure

To adjust the maximum temperature stop, first rotate the temperature knob to the 12 o'clock position.

Remove the temperature knob trim using a thin bladed screwdriver (**fig.78**).

Unscrew the central fixing screw and remove the temperature control knob (**fig.79**). Now remove the temperature control disc, together with the wavy washer. The control disc houses the maximum temperature stop mechanism (**fig.80**).

To increase the temperature stop setting, reposition the temperature stop mechanism clockwise within the arc of the grooves (**fig.80**).

To decrease the temperature stop setting, reposition the stop mechanism anti-clockwise within the arc of the grooves.

When the stop mechanism is set at the preferred position, refit the temperature control disc making sure the name 'TRITON' is at the bottom.

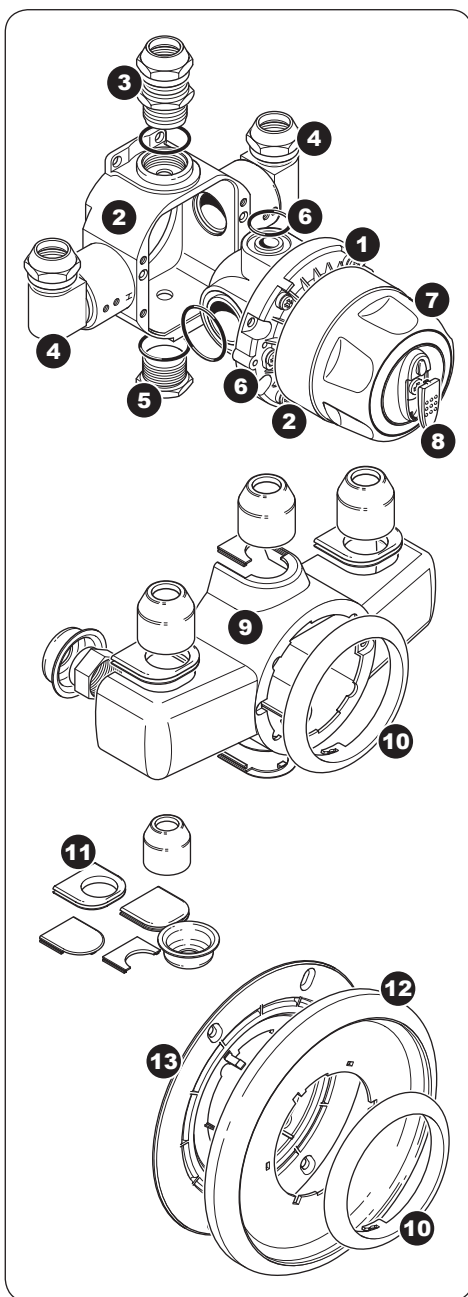
Replace the wavy washer, then refit the temperature control knob, making sure it is replaced in the same attitude as when removed (i.e. 12 o'clock position).

Refit the central screw and replace the knob trim.

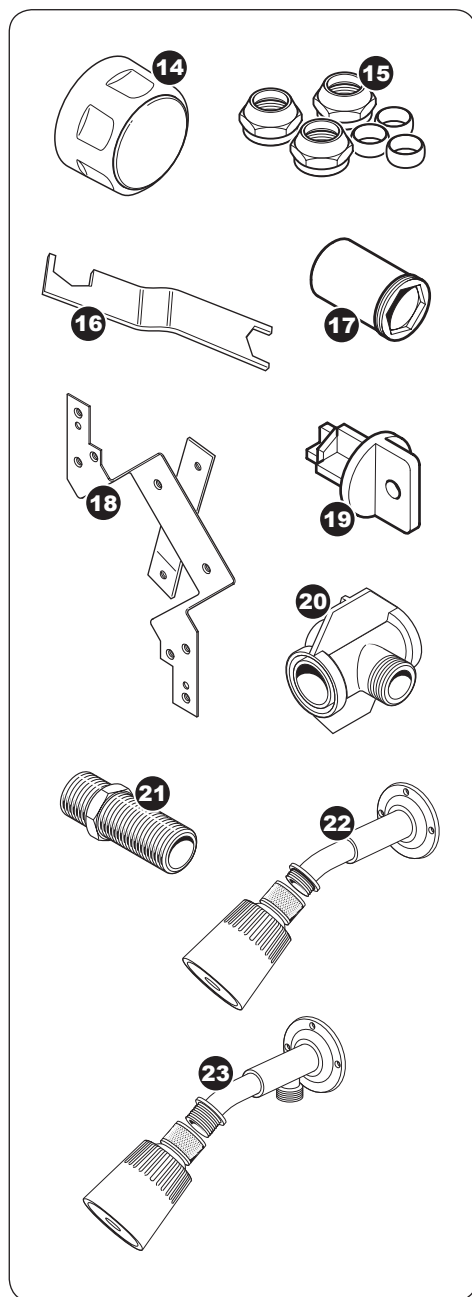
IMPORTANT: Only adjust the maximum temperature stop when the hot water is at its usual supply temperature.

SPARE PARTS

Ref.	Description	Part No.
1.	HP valve cartridge (built-in valve)	83304970
2.	HP cartridge and brass housing (exposed valve)	83304960
3.	Outlet adaptor chrome gold	7031462 7031463
4.	Inlet elbow assembly	83303810
5.	Outlet blanking plug	7031460
6.	Cartridge 'O' rings	83303710
7.	Knob set – white	83304810
8.	Knob trim	7051466
9.	Cover shroud white (exposed valve) chrome (exposed valve) gold (exposed valve)	7041444 7041445 7041446
10.	Trim ring white chrome gold gold (flush)	7051441 7051442 7051443 7051477
11.	Trim sets white chrome gold	83303680 83303670 83303690
12.	Cover plate white (built-in valve) chrome (built-in valve) gold (built-in valve)	7051448 7051449 7051450
13.	Mounting plate (built-in valve)	7051447
–	Outlet pipe white chrome effect gold effect	TAS00404 TAS00004 TAS00304



SPARE PARTS



Ref.	Description	Part No.
14.	Bulkhead assembly	
	white	83303780
	chrome effect	83303770
	gold effect	83303790
	– Trim disc (use with flush gold effect)	7051451
15.	Inlet & outlet nuts	83303660
16.	Spanner	7011766
	– Flow regulator	22003530
17.	Check valve/sleeve assembly	83303810
18.	Wall bracket	7011453
19.	Check valve tool	7051476
20.	Flushing cartridge (available on request)	7052032
21.	Nutted male thread fitting	7032915
22.	Tamperproof fixed head built-in	96200250
23.	Tamperproof fixed head exposed	96200240
	– Fixed head assembly – white	22450060
	– Fixing kit	22009490
	Flexible hoses available in the following sizes:	
	1.00 m in white, chrome and gold	
	1.25 m in white, chrome and gold	
	1.75 m in chrome only	
	– PVC shroud (flush fit only)	7052165
	– Screw pack	83303800
	– Extended control lever (Can be fitted easily to make the controls easier to use. Available on request from Triton Customer Service).	

FAULT FINDING

Problem/Symptom	Cause	Action/Cure
1 Water too hot.	1.1 Not enough cold water flowing through shower.	1.1.1 Turn the control knob anti-clockwise.
	1.2 Increase in the ambient cold water temperature.	1.2.1 Turn the control anti-clockwise.
	1.3 High volume of cold water drawn off elsewhere.	1.3.1 Reduce the simultaneous demand from supply — make sure a dedicated supply to mixer.
	1.4 Excessive flow rate.	1.4.1 Contact Customer Service for advice on flow regulators.
	1.5 Dirty check valves.	1.5.1 Clean – refer to 'Flushing Procedure'.
2 Water too cold.	2.1 Not enough hot water flowing through shower.	2.1.1 Turn the temperature control clockwise. (Override the max. temperature stop if necessary).
	2.2 Decrease in the ambient cold water temperature.	2.2.1 Turn the temperature control clockwise. (Override the max. temperature stop if necessary).
	2.3 Not enough hot water supplied from the heating appliance.	2.3.1 Make sure heating cylinder is set to maximum hot water output.
	2.4 Excessive flow rate.	2.4.1 Contact Triton Customer Service for advice on flow regulators.
	2.5 Dirty check valves.	2.5.1 Clean – refer to 'Flushing Procedure'.
3 Water does not flow or shower pattern collapses when another outlet is turned on.	3.1 Water supplies cut off.	3.1.1 Check water elsewhere in house and if necessary contact local water company.
	3.2 Shower unit blocked.	3.2.1 Inspect the flow regulators (if fitted) and the check valves – refer to 'Flushing Procedure'. Clean if necessary.
	3.3 Showerhead blocked.	3.3.1 Clean showerhead.
	3.4 Reduced flow rate when other outlets in use.	3.4.1 Reduce the simultaneous demand — make sure a dedicated supply to mixer. 3.4.2 Make sure service valves are fully open.

FAULT FINDING

<i>Problem/Symptom</i>	<i>Cause</i>	<i>Action/Cure</i>
4 Water too cold or too hot.	4.1 Water supply blocked or restricted.	4.1.1 Turn off the shower and consult a competent plumber or contact Triton Customer Service.
5 Water does not flow or shower pattern collapses when another outlet is turned on.	5.1 Blockage in pipework.	5.1.1 Turn off the shower and consult a suitably competent plumber.
6 Shower will not shut off.	6.1 Pipework not flushed before connecting the unit('O' rings damaged).	6.1.1 Renew cartridge (internal seals are not serviceable).

Any maintenance or repair to the shower must be carried out by a suitably qualified person



Service Policy

In the event of a complaint occurring, the following procedure should be followed:

- 1 Telephone Customer Service on 0870 067 3333 (0845 762 6591 in Scotland and in Northern Ireland), having available the model number and power rating of the product, together with the date of purchase.
- 2 Triton Customer Service will be able to confirm whether the fault can be rectified by either the provision of a replacement part or a site visit from a qualified Triton service engineer.
- 3 If a service call is required the unit must be fully installed for the call to be booked and the date confirmed. In order to speed up your request, please have your postcode available when booking a service call.
- 4 It is essential that you or an appointed representative (who must be a person of 18 years of age or more) is present during the service engineer's visit and receipt of purchase is shown.
- 5 A charge will be made in the event of an aborted service call by you but not by us, or where a call under the terms of guarantee has been booked and the failure is not product related (i.e. scaling and furring, incorrect water pressure).
- 6 If the product is no longer covered by the guarantee, a charge will be made for the site visit and for any parts supplied.
- 7 Service charges are based on the account being settled when work is complete, the engineer will then request payment for the invoice. If this is not made to the service engineer or settled within ten working days, an administration charge will be added.

Replacement Parts Policy

Availability: It is the policy of Triton to maintain availability of parts for the current range of products for supply after the guarantee has expired. Stocks of spare parts will be maintained for the duration of the product's manufacture and for a period of five years thereafter.

In the event of a spare part not being available a substitute part will be supplied.

Payment: The following payment methods can be used to obtain spare parts:

- 1 By post, pre-payment of pro forma invoice by cheque or money order.
- 2 By telephone, quoting credit card (MasterCard or Visa) details.
- 3 By website order, www.tritonshowers.co.uk

TRITON STANDARD GUARANTEE

Triton guarantee this product against all mechanical defects arising from faulty workmanship or materials for a period of three years for domestic use only, from the date of purchase, provided that it has been installed by a competent person in full accordance with the fitting instructions.

Any part found to be defective during this guarantee period we undertake to repair or replace at our option without charge so long as it has been properly maintained and operated in accordance with the operating instructions, and has not been subject to misuse or damage.

This product must not be taken apart, modified or repaired except by a person authorised by Triton. This guarantee applies only to products installed within the United Kingdom and does not apply to products used commercially. This guarantee does not affect your statutory rights.

What is not covered:

- 1 Breakdown due to: *a)* use other than domestic use by you or your resident family; *b)* wilful act or neglect; *c)* any malfunction resulting from the incorrect use or quality of water or incorrect setting of controls; *d)* faulty installation.
- 2 Repair costs for damage caused by foreign objects or substances.
- 3 Total loss of the product due to non-availability of parts.
- 4 Compensation for loss of use of the product or consequential loss of any kind.
- 5 Call out charges where no fault has been found with the appliance.
- 6 The cost of repair or replacement of showerheads, hoses, riser rails and/or wall brackets or any other accessories installed at the same time.
- 7 The cost of routine maintenance, adjustments, overhaul modifications or loss or damage arising therefrom, including the cost of repairing damage, breakdown, malfunction caused by corrosion, furring, pipe scaling, limescale, system debris or frost.

Customer Service: ☎ 0870 067 3333

**Scottish and Northern Ireland
Customer Service:** ☎ 0845 762 6591

Trade Installer Hotline: ☎ 0870 067 3767
Fax: 0870 067 3334

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